

SLA346 Claim•• | |

PATENT ABSTRACTS OF JAPAN

(11)Publication number : **2000-013755**

(43)Date of publication of application : **14.01.2000**

(51)Int.Cl.

H04N 7/025

H04N 7/03

H04N 7/035

H04N 7/08

H04N 7/081

G11B 27/031

H04N 5/268

H04N 5/44

H04N 5/765

H04N 5/781

// H04N 7/173

(21)Application number : **10-186968** (71)Applicant : **JISEDAI JOHO HOSO
SYSTEM KENKYUSHO:KK
NIPPON HOSO KYOKAI
<NHK>**

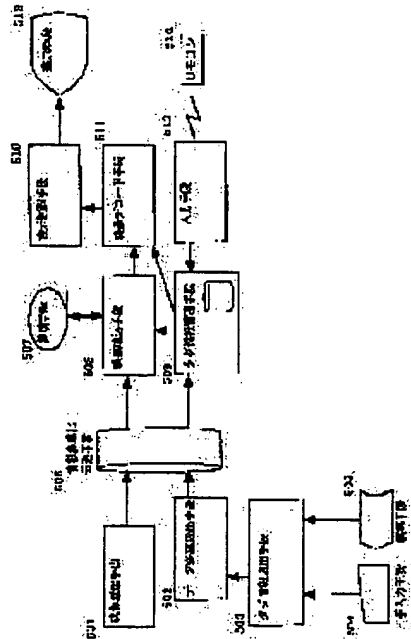
(22)Date of filing : **17.06.1998** (72)Inventor : **HARADA TAKENOSUKE
KATAOKA MITSUTERU**

AOKI KATSUNORI

KAWAI NAOKI

ISOBE TADASHI

(54) BROADCASTING SYSTEM



(57)Abstract:

PROBLEM TO BE SOLVED: To provide a broadcasting system capable of serving a program to match a viewer's taste by realizing diversification of scene collection.

SOLUTION: In the broadcasting system in which video/sound information of the program and tag information to specify its scene are broadcasted while being multiplexed on the program from a broadcasting station and which is provided with a storage means 507 to hold the video/sound information and the tag information of the broadcasted program by relating them each other at a reception terminal, 'the tag information to specify the scene by specifying negative time' which

is inputted from a manual input means 504 is outputted by the broadcasting station, the tag information is related to the scene to be traced back by the specified time of the video/sound information held in the storage means and is stored in the storage means by a tag managing means 509 of the reception terminal. A tag is attached to the past scene and a highlight scene of a relayed running commentary is specified.

CLAIMS

[Claim(s)]

[Claim 1] From a broadcasting station, the tag information which specifies the picture and the speech information, and its scene of a program is multiplexed and broadcast. In the broadcast system by which a store means to associate and hold the picture and the speech information, and the tag information on a program which were broadcast to an accepting station is established The broadcast system characterized by for a

broadcasting station outputting the tag information which specifies negative time and specifies a scene, and for an accepting station relating the aforementioned tag information with the scene to which only the time when the picture and speech information held at the store means were specified goes back, and holding for the aforementioned store means.

[Claim 2] The broadcast system according to claim 1 characterized by reading and carrying out the regeneration display of the scene held by relating with the aforementioned tag information from the aforementioned store means when there is designation of a televiewer, even as the aforementioned tag information that the negative time in the middle of a real-time broadcast of a broadcasting station was specified was outputted and the accepting station showed the picture and speech information of a real-time broadcast.

[Claim 3] The broadcast system according to claim 2 by which an accepting station is characterized by suspending a regeneration display of the scene relevant to the aforementioned tag information at the broadcasting hours of commercials.

[Claim 4] The broadcast system according to claim 2 by which an accepting station is characterized by wedging a part of commercial picture [at least] into the broadcasting hours of commercials at the regeneration display screen of the scene relevant to the aforementioned tag information.

[Claim 5] The broadcast system characterized by rewriting the received tag information in the broadcast system by which a store means to associate and hold the picture and the speech information, and the tag information on a program which the tag information which specifies the picture and the speech information, and its scene of a program was multiplexed and broadcast from the broadcasting station, and were broadcast by the accepting station is established in order that an accepting station may change the link status of a scene.

[Claim 6] The broadcast system according to claim 5 by which an accepting station is characterized by rewriting the tag information which specifies the aforementioned scene so that the scene which suits a televiewer's taste may be chosen and each of the aforementioned scene may link in in-series from the broadcast picture and speech information.

[Claim 7] The broadcast system according to claim 5 characterized by rewriting the tag information which specifies the aforementioned scene in order that an accepting station may change two or more scenes linked in in-series into the parallel-link which enables alternative selection.

[Claim 8] From a broadcasting station, the tag information which specifies the picture

and the speech information, and its scene of a program is multiplexed and broadcast. In the broadcast system by which a store means to associate and hold the picture and the speech information, and the tag information on a program which were broadcast to an accepting station is established The broadcast system characterized by computing and displaying the scene linked on the basis of the value specified by the televiewer in order that a broadcasting station may broadcast the multi-story program which can choose a story and an accepting station may perform selection of a story.

[Claim 9] From a broadcasting station, the tag information which specifies the picture and the speech information, and its scene of a program is multiplexed and broadcast. In the broadcast system by which a store means to associate and hold the picture and the speech information, and the tag information on a program which were broadcast to an accepting station is established A part is real time about each scene of the selectable story of a multi-story program using the subchannel of a plurality [broadcasting station]. The remainder is a broadcast system characterized by performing read-out of the aforementioned scene held at selection or the store means of a subchannel in order to broadcast by the advance, and for an accepting station to hold the scene broadcast by the advance for a store means and to perform selection of a story.

[Claim 10] From a broadcasting station, the tag information which specifies the picture and the speech information, and its scene of a program is multiplexed and broadcast. In the broadcast system by which a store means to associate and hold the picture and the speech information, and the tag information on a program which were broadcast to an accepting station is established A tag information prescribes the scenario using the scene of a part of program which a broadcasting station broadcasts. The broadcast system characterized by choosing a scene as a scenario and reproducing based on the aforementioned tag information when regeneration with the aforementioned scenario is chosen from a televiewer in case of the regeneration of the aforementioned program which multiplexes with the picture and speech information of the aforementioned program, and is broadcast, and by which the accepting station was held at the store means.

[Claim 11] The broadcast system according to claim 10 by which the method of choosing regeneration with the aforementioned scenario is characterized by enabling it to get to know through information medias other than a broadcast.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] this invention plans broadcast system implementation which enables it to carry out selection viewing and listening of the picture scene by the receiving side especially, or to reconfigure the regeneration sequence of a picture scene about the broadcast system which sponsors the program suitable for a televiewer's taste.

[0002]

[Description of the Prior Art] The age of digitization has come and ED of digital broadcasting is actively advanced also in the broadcast field of our country.

[0003] In the digital satellite broadcasting which uses a satellite, it encodes by the specification of MPEG 2 system, and a picture, voice, and data are multiplexed and broadcast by MPEG 2 transport stream (TS). In this digital broadcasting, the number of channels can be increased by leaps and bounds, and various kinds of services in the coordination with data broadcasting are attained.

[0004] Into the group including this invention person, the development of the digital-broadcasting system of the next generation which can watch a program to watch at its pace, without a televiewer being bound by broadcast time is furthered.

[0005] In this broadcast system, without waiting for operation of a televiewer, out of the information broadcast, the accepting-station equipment with an intelligent function chooses the program which suits a televiewer's taste, and is accumulated automatically. A televiewer can display the information accumulated in this way on the screen of an accepting station, and can enjoy it at convenient time.

[0006] In such an accumulated type information broadcast system, a broadcasting station gives the tag as control information to the program information to broadcast, and a receiving side chooses and accumulates a program on the basis of this tag. For example, by the accepting station, it can distinguish whether the program conforms with a televiewer's taste as compared with informations, such as a televiewer's age, and sex, taste nature, or the information on an old viewing-and-listening history by including the keyword showing the information which shows the viewing-and-listening candidate layer of the program which the program implementor set up, the performer of a program, etc. in a tag information.

[0007] Moreover, in the accumulated type information broadcast system, the program offer method which enables it to view and listen to the picture scene of a program alternatively by the receiving side is proposed. For example, it enables it to meet the demand of the televiewer who wants to see only the sport news in a news program.

[0008] Although such a method is called scene collection, three kinds of methods for carrying out this scene collection are proposed. The 1st is the method which layered-structure-izes a program (event) like a layer 1, the layer 2, and the layer 3, as shown in drawing 10 (a). For example, it is the condition of ****ing for politics, a district, and sports, dividing a news program into domestic politics and international politics about politics on the level of a layer 2, dividing it into the news for every area about a district, and dividing it into baseball, a sucker, and a horse race about a sport on the level of a layer 1. In drawing 10 (a), the scene which it ****ed in each layer is expressed with #1, #2, --, #15. These partitions are performed by giving a tag to a program information. In this case, in a receiving side, it can choose, view and listen only to a required scene on the basis of a hierarchy view out of the accumulated program information.

[0009] Two or more scenarios which a program offer side chooses the various scenes of a program, and connected are created, a televiewer offers them, and the 2nd method which carries out a scene collection chooses, views and listens to a favorite scenario, as shown in drawing 10 (b). For example, it is the condition that create and offer scenario A which connected only the attack scene of A team of the first to go into attack, and scenario B which connected only the attack scene of B team of the last to go into attack in a baseball broadcast, the televiewer who favors A team views and listens to scenario A, and the televiewer who aids B team views and listens to scenario B.

[0010] What says that a televiewer looks at the game from 3 times of tables can be simply performed by dividing the 3rd method into a PERT like [as shown in drawing 10 (c) / a part of program] two sections, and dividing a broadcast of a baseball game into a PERT for every time for example.

[0011] In digital broadcasting, as shown in drawing 11 , it is described by the table called EIT, and the information of the information about a program, i.e., program ID, a program start time, program length, etc., etc. is multiplexed with picture speech information, and is broadcast. For a scene collection, two or more tags are attached to the program shown by one EIT, a scene is selected, and a start time, a duration, etc. of each of this scene are described by the table (scene collection section) shown in drawing 12 . Moreover, it is set up as a scene profile whether it is a scene collection by which method.

[0012] Moreover, a link place is described by this descriptor field, when an individual explanation of each scene is described by the descriptor field of a tag and connects each scene in a scenario. Drawing 13 shows the hyperlink descriptor prepared for this description, and it is this hyperlink descriptor, and as shown in 1201 of drawing 8 , the

display of the picture as a scenario of it is attained by the receiving side by specifying scene ID of the following jump place.

[0013] In addition, in using a hyperlink descriptor, not only making it link to the scene in one program but other programs, the link to a scene profile of a different kind, etc. become possible. The mode of this link is illustrated in drawing 9.

[0014] The broadcast system which carries out this scene collection A picture sending-out means 501 by which a broadcasting station sends out the picture of a program as shown in drawing 14, An edit means 505 to generate a tag information as part of edit processing which selects a scene or creates a scenario, A tag information-sending means 503 to generate as an information which inserts a tag information in the scene collection section of drawing 12, It has a data multiplex sending-out means 502 to multiplex and send out the picture and speech information outputted from the tag information outputted from the tag information-sending means 503, and the picture sending-out means 501. The information delivered from the data multiplex sending-out means 502 is broadcast by accepting-station equipment through the information multiplexing transmission means 506.

[0015] It has a store means 507 save the picture which received accepting-station equipment on the other hand, and data, the picture taking-in means 508 which take out the picture which saves a picture and data for the store means 507, and is displayed from the store means 507, the picture decoding means 511 which carry out the decode of the picture, a display-control means 510 control a display, a display means 513 display a picture, and an input means 512 input the information which a televiewer orders it through remote control 514.

[0016] In this system, a highlight scene is chosen from the recorded picture, or the edit means 505 of a broadcasting station connects the scene, and creates a scenario. At this time, the tag information which specifies the selected scene and specifies the link of these scenes is created. The tag information-sending means 503 is generated as an information which inserts in the scene collection section of drawing 12 the tag information created with the edit means 505, and the data multiplex sending-out means 502 multiplexes the picture and speech information outputted from the data outputted from the tag information-sending means 503, and the picture sending-out means 501 to MPEG-2TS, and broadcasts it through the information multiplexing transmission means 506.

[0017] With accepting-station equipment, the picture taking-in means 508 associates a picture and a tag information from the information on a stream, and saves to the store means 507. If the scene and scenario to which a televiewer views and listens using

remote control 514 are demanded, the picture taking-in means 508 will take in a highlight scene and the scene connected in the scenario from the store means 507 one after another along with a demand of a televiewer based on a tag information, and will send it to the picture decoding means 511. The decode of this picture is carried out with the picture decoding means 511, and it is displayed on the display means 513.

[0018] In this way, a televiewer can view and listen to his favorite highlight scene alternatively. [in a program]

[0019]

[Problem(s) to be Solved by the Invention] However, for this scene collection, it has the following troubles.

(1) It is not made even if it is going to attach a tag to the chute scene seen now when the picture is being broadcast on real time like the live broadcast of a sport program, although a tag can be attached with rewinding to a picture after recording for the scene collection explained until now. That is, in a live broadcast, to the already broadcast scene, it could not go back in the past and a tag cannot be attached.

(2) Technique only has choosing from inside the scenario with which the highlight scene was connected, although created by the broadcasting station side, and a televiewer cannot make it the scenario reflecting a televiewer's intention.

(3) For this scene collection, while a televiewer chooses, the multi-story which advances a story cannot be carried out.

[0020] this invention aims at an improvement of such a point, realizes diversification of a scene collection, and aims at offering the broadcast system which can make the intention by the side of a televiewer reflect in selection of a scene, or a setup of a scenario directly.

[0021]

[Means for Solving the Problem] Then, in the broadcast system of this invention, a broadcasting station outputs the tag information which specifies negative time and specifies a scene, and an accepting station relates this tag information with the scene to which only the time when the picture and speech information held at the store means were specified goes back, and is made to hold it for a store means.

[0022] Moreover, an accepting station rewrites the received tag information and is made to change the link status of a scene.

[0023] Moreover, a broadcasting station broadcasts the multi-story program which can choose a story, and an accepting station computes the scene linked on the basis of the value specified by the televiewer, and is made to perform selection of a story.

[0024] Moreover, using the subchannel of a plurality [broadcasting station], a part is

real time about each scene of the selectable story of a multi-story program, and it is made to perform selection of a story by read-out of the scene by which it broadcasts by the advance, an accepting station holds the scene broadcast by the advance for a store means, and the remainder was held at selection or the store means of a subchannel.

[0025] Moreover, a tag information prescribes the scenario using the scene of a part of program, a broadcasting station multiplexes with the picture and speech information of the program, and broadcasts, and when a televiewer chooses regeneration with the scenario, based on a tag information, a scene is chosen as a scenario, and it is made to reproduce in an accepting station in the case of regeneration of the program recorded on videotape.

[0026] By such configuration, a tag can be attached to a past scene, or a scenario can be reconfigured so that a televiewer's intention may be met. Moreover, a multi-story program can broadcast the multi-story program which has much alternative on real time, when a televiewer can operate a key, can choose advance of a story and uses two or more subchannels. Moreover, in the case where a potential scenario is multiplexed and broadcast, when a program is recorded on videotape and it reproduces by the accepting station, viewing and listening with the scenario different from a real-time broadcast is attained.

[0027]

[Embodiments of the Invention] From a broadcasting station, the tag information which specifies the picture and the speech information, and its scene of a program is multiplexed, and invention of this invention according to claim 1 is broadcast. In the broadcast system by which a store means to associate and hold the picture and the speech information, and the tag information on a program which were broadcast to an accepting station is established A broadcasting station outputs the tag information which specifies negative time and specifies a scene. An accepting station relates this tag information with the scene to which only the time when the picture and speech information held at the store means were specified goes back, is made to hold for a store means, and can attach a tag to a past scene.

[0028] Invention according to claim 2 outputs the tag information which specifies the negative time in the middle of a real-time broadcast of a broadcasting station. Even as the accepting station showed the picture and speech information of a real-time broadcast, when there is designation of a televiewer Read the scene held by relating with this tag information from a store means, are made to carry out a regeneration display, and it sets in an on-the-spot relay. A tag can be given to the already broadcast highlight scene afterwards, a display of an on-the-spot relay can be interrupted for an accepting

station on it at any time, and the regeneration picture image of this highlight scene can be displayed on it.

[0029] An accepting station is made to suspend a regeneration display of the scene relevant to this tag information to the broadcasting hours of commercials, and invention according to claim 3 can cancel the dissatisfaction of the advertiser that it becomes impossible that a commercial picture is seen and given for regeneration of a highlight scene.

[0030] In the broadcasting hours of commercials, an accepting station is made to wedge a part of commercial picture [at least] into the regeneration display screen of the scene relevant to this tag information, and invention according to claim 4 can cancel the dissatisfaction of the advertiser that it becomes impossible that a commercial picture is seen and given for regeneration of a highlight scene, by the option.

[0031] From a broadcasting station, the tag information which specifies the picture and the speech information, and its scene of a program is multiplexed, and invention according to claim 5 is broadcast. In order that an accepting station may change the link status of a scene into an accepting station in the broadcast system by which a store means to associate and hold the picture and the speech information, and the tag information on a program which were broadcast is established, The received tag information is rewritten, and a scenario can be reconfigured so that a televiewer's intention may be met.

[0032] Invention according to claim 6 rewrites the tag information which specifies a scene, and can collect the pictures suitable for a televiewer's taste so that the scene which suits a televiewer's taste from the picture and speech information it was broadcast that an accepting station was may be chosen and each of this scene may link in in-series.

[0033] Since an accepting station changes two or more scenes linked in in-series into the parallel-link which enables alternative selection, invention according to claim 7 rewrites the tag information which specifies this scene, for example, parallelizes the scene which changes the same object and displays an angle repeatedly, and can shorten viewing-and-listening time by seeing only one scene in it.

[0034] From a broadcasting station, the tag information which specifies the picture and the speech information, and its scene of a program is multiplexed, and invention according to claim 8 is broadcast. In the broadcast system by which a store means to associate and hold the picture and the speech information, and the tag information on a program which were broadcast to an accepting station is established In order that a broadcasting station may broadcast the multi-story program which can choose a story

and an accepting station may perform selection of a story, The scene linked on the basis of the value specified by the televiewer is computed, it is made to display, and a story advances according to selection by a televiewer's key stroke.

[0035] From a broadcasting station, the tag information which specifies the picture and the speech information, and its scene of a program is multiplexed, and invention according to claim 9 is broadcast. In the broadcast system by which a store means to associate and hold the picture and the speech information, and the tag information on a program which were broadcast to an accepting station is established A part is real time about each scene of the selectable story of a multi-story program using the subchannel of a plurality [broadcasting station]. In order to broadcast the remainder by the advance, and for an accepting station to hold the scene broadcast by the advance for a store means and to perform selection of a story, It is made to perform read-out of the scene held at selection or the store means of a subchannel, and the multi-story program which has much alternative can be broadcast on real time using a few number of subchannels.

[0036] From a broadcasting station, the tag information which specifies the picture and the speech information, and its scene of a program is multiplexed, and invention according to claim 10 is broadcast. In the broadcast system by which a store means to associate and hold the picture and the speech information, and the tag information on a program which were broadcast to an accepting station is established A tag information prescribes the scenario using the scene of a part of program which a broadcasting station broadcasts. Multiplex with the picture and speech information of the program, broadcast, and an accepting station faces regeneration of the program held at the store means. When regeneration with the scenario is chosen from a televiewer, based on a tag information, a scene is chosen as a scenario, and it is made to reproduce, and in case the broadcast program is accumulated and it reproduces, by the accepting station, viewing and listening with the scenario different from a real-time broadcast is attained.

[0037] The key stroke technique in case invention according to claim 11 views and listens to a scenario in the text which the method of choosing regeneration with this scenario enables it to know through information medias other than a broadcast, for example, sells at a bookstore is explained, and a televiewer purchases a text and performs regeneration operation of a scenario.

[0038] (1st operation gestalt) The broadcast system of this invention A picture sending-out means 501 by which a broadcasting station sends out the picture of a program as shown in drawing 1 , An edit means 505 to generate a tag information as part of edit processing which selects a scene or creates a scenario, The care force means

504 which carries out the core force of the tag information, and a tag information-sending means 503 to generate as an information which inserts a tag information in a scene collection section. It has a data multiplex sending-out means 502 to multiplex and send out the picture and speech information outputted from the tag information outputted from the tag information-sending means 503, and the picture sending-out means 501. The information delivered from the data multiplex sending-out means 502 is broadcast by accepting-station equipment through the information multiplexing transmission means 506.

[0039] A store means 507 to, save the picture which received accepting-station equipment, and data on the other hand, The picture taking-in means 508 which saves a picture and data for the store means 507, and takes out the picture to display from the store means 507, A tag information management means 509 to perform a management and reconstitution of a tag information, and the picture decoding means 511 which carries out the decode of the picture, It has a display-control means 510 to control a display, a display means 513 to display a picture, and an input means 512 to input the information which a televiewer orders it through remote control 514.

[0040] the 2- which this broadcast structure of a system mentions later -- also in the broadcast system of the 5th operation gestalt, it is the same

[0041] In this system, choose a highlight scene from the recorded picture, or the edit which connects the scene and creates a scenario is performed by the edit means 505, and the selected scene is specified, or the tag information which specifies the link of these scenes is created at this time. The information explaining the selected scene etc. is added to a tag information.

[0042] The tag information-sending means 503 is generated as an information which inserts in the scene collection section of drawing 12 the tag information created with the edit means 505, and the data multiplex sending-out means 502 multiplexes the picture and speech information outputted from the data outputted from the tag information-sending means 503, and the picture sending-out means 501 to MPEG-2TS, and broadcasts it through the information multiplexing transmission means 506.

[0043] With accepting-station equipment, the picture taking-in means 508 associates a picture and a tag information from the information on a stream, and saves to the store means 507. [0044] While the received tag information was managed, when a televiewer inputs a demand using remote control 514, the tag information management means 509 receives this through the input means 512, performs required processing, and tells it to the picture taking-in means 508. The picture taking-in means 508 takes out the specified picture from the store means 507 based on a tag information.

[0045] The decode of the picture taken out from the store means 507 is carried out with the decoding means 511, and it is displayed on the display means 513 which is TV screen through the display-control means 510.

[0046] Like a sport relay broadcast, by broadcast of real time, a highlight scene occurs when or a forecast does not stick. Therefore, after broadcasting the scene, unless it is, a tag cannot be specified to be the scene. In such a case, in a broadcast side, the tag which specifies negative time is inputted using the care force means 504.

[0047] This tag information is generated as the tag information created with the edit means 505, and an information similarly inserted in the scene collection section of drawing 12 with the tag information-sending means 503, with the data multiplex sending-out means 502, is multiplexed with a picture and speech information, and is broadcast.

[0048] The tag information management means 509 of accepting-station equipment converts the regular time when the tag should originally be attached when the tag which specifies negative time is received, and the picture taking-in means 508 is saved for the store means 507 as a tag information to which this was given at regular time.

[0049] Thus, when taking out the picture displayed by converting and saving the regular time when a tag is attached from the store means 507, it is enabled to treat like a usual tag and the application which searches a scene on the basis of a tag information is not forced too much burden.

[0050] The setting field in the time mode in which time base is specified is established in the scene collection section of drawing 12. In the case of the tag which specifies negative time, this time mode is set as "3" and the time is set up at the card column of a "start time." Incidentally, "0" of the time mode expresses real time, "1" expresses the elapsed time on the basis of a program start time, and "2" expresses the elapsed time on the basis of the present time.

[0051] Drawing 2 shows the example in the case of going back to a past picture and attaching a tag. Drawing 2 (a) expresses serially the scene of the sucker game broadcast live, and the success scene of a chute presupposes that it was broadcast with the picture shown with the oblique line. Since a broadcast person in charge gives a tag to this chute scene, at the time of ** in which only time t passed from the chute scene, he specifies the time of -t by the care force means 504, and sets up a tag information. Moreover, the information of "a ***** chute" explaining a highlight scene is added to this tag information as a title.

[0052] The tag information-sending means 503 sets the time mode of the scene collection section of drawing 12 as "3" in response to this, sets "t" as the card column of

a "start time", and describes a tag information.

[0053] The tag information management means 509 of accepting-station equipment computes the time of being ** the tag of whose is the regular time which should originally be attached, when this tag is received, and the picture taking-in means 508 is saved for the store means 507 as a tag information to which this was given at the time of **.

[0054] If the televiewer who is watching relay broadcast of a sucker game performs button grabbing of "highlight" viewing and listening by remote control 514 at the time of a black dot, as shown in drawing 2 (b), the title 604 of the various highlight scenes saved for the store means 507 will be displayed on the display screen in a menu format. If a televiewer chooses "a ***** chute" from a menu by remote control 514, the picture taking-in means 508 will take in the highlight scene specified for the tag information on "a ***** chute" out of the scene saved for the store means 507, and will output it to the picture decoder means 511.

[0055] In this way, instead of the picture of a real-time broadcast, the regeneration picture of a "***** chute" scene (drawing 2 (c)) is expressed for the display means 513 as the timing of (A). Even if a televiewer is in this way at the real-time broadcast time, he can try to repeat a highlight scene at the arbitrary times.

[0056] In addition, in a televiewer replacing with CM and looking at this highlight scene at the time of CM broadcast, it is very inconvenient for CM provider. Then, a tag information management means 509 to also manage the tag of CM can detect the time zone when CM is broadcast with the tag, and can control it to stop regeneration of a highlight scene at the time of a broadcast of CM. Moreover, when allowing regeneration of a highlight scene at the time of CM televising, as shown in drawing 2 (c), it is also one solution in this case to carry out forced display of CM606 to a screen with the title 605 of a highlight scene.

[0057] Thus, for the scene collection of this operation gestalt, even if it is in the case of a live broadcast, it is enabled to start a highlight scene at any time and to replay by the accepting station.

[0058] (2nd operation gestalt) The 2nd operation gestalt explains the case where the story of a scenario is reconfigured by the accepting station.

[0059] Although all the scenes used for a scenario are selected for the scene collection of the conventional multi-scenario format at a broadcasting station, the scene which a televiewer likes is incorporated by the scenario by the accepting-station side with this operation gestalt.

[0060] In order to realize this custom-made scenario, a broadcasting station describes

and broadcasts the keyword of a scene to the descriptor field of each tag information on a scene collection section.

[0061] On the other hand, the tag information management means 509 of accepting-station equipment compares the keyword described by the tag information with the keyword given to the program to which a televiewer likes, views and listens, and chooses the scene which suits a televiewer's taste. And the descriptor of the tag information on each scene which chose the selected scene in order for the link attachment ** reason is rewritten by the hyperlink descriptor.

[0062] In this way, a thing like the link collection of the scene on which a televiewer's favorite talent is appearing, for example can be made.

[0063] Drawing 3 shows by comparison the scenario 1 (drawing 3 (b)) and the scenario 2 (drawing 3 (c)) which chose and created the scene by the broadcasting station side, and the custom-made scenario (drawing 3 (d)) which chose a part of scene (scene which attached the arrow head) by the accepting-station side on the basis of the program shown in drawing 3 (a). It is also possible to select the scene which is to the foundations of a scenario by the broadcasting station side in this way in a custom-made scenario, to add the scene chosen as this by the accepting-station side, and to create one scenario.

[0064] Moreover, drawing 4 shows other examples which reconfigure the story of a scenario by the accepting-station side. A broadcasting station broadcasts each scene of #1, #2, #3, #4, #5, #6, and -- in order. Among this, #3 are the chute scene of a sucker, #4 are the scene which projected the same chute from another angle, and #5 presuppose that it is the slow motion picture.

[0065] The tag information management means 509 of the accepting station which received this broadcast rewrites description of a hyperlink descriptor which specifies the link place of a scene, and the picture of #4 and #5 which repeats the same scene as #3 changes it so that it may become the scene which can be chosen in parallel with #3.

[0066] In this case, in order to enable parallel-selection of three or more scenes, as shown in 1202 of drawing 8 , scene ID of a link place is set up as "scene ID offset + (key input)", the value which the televiewer keyed by remote control 514 is considered, and the scene of a jump place is made to be decided by the hyperlink descriptor.

[0067] In this way, the tag information by which the hyperlink descriptor was rewritten is saved for the store means 507 with the picture of each scene.

[0068] At the time of regeneration of this scenario, if it keys "1" from remote control 514 while the scene of #2 is reproduced, (supposing the value of scene ID offset is "3"), the tag information management means 509 will calculate $3+1=4$, and will specify the scene of #4 as a next scene of the scene of #2. In this case, a scene is reproduced in the order

of #2, #4, #6, #7, and --. Moreover, while the scene of #2 was reproduced, when it keys "2" from remote control 514, the tag information management means 509 calculates $3+2=5$, and specifies #5 as a next scene of the scene of #2. At this time, a scene is reproduced in the order of #2, #5, #6, #7, and --. Moreover, if a key input is not carried out while the scene of #2 is reproduced, #3 of a default pattern are reproduced by the degree of #2.

[0069] Thus, except for repeat regeneration of the same scene, shortening of viewing-and-listening time can be attained by reconstructing the broadcast scenario by the accepting station.

[0070] (3rd operation gestalt) With the 3rd operation gestalt, while a televiewer chooses, the system which advances a story and which realizes a multi-story is explained.

[0071] In this system, a broadcasting station broadcasts the scenario in which parallel scene selection is possible, as shown in drawing 5. In order to specify the parallel-link of three or more scenes, as shown in 1202 of drawing 8, scene ID of a link place is set to the tag information in this case by "scene ID offset + (key input)" by the hyperlink descriptor.

[0072] This scenario is accumulated with a picture at the store means 507, and the scene to link is changed according to the key input by remote control 514 at the time of regeneration. Therefore, after reproducing #2, #3 and #6, #7, #9, or #10 and reproducing #4 subsequently according to a key input next it was regeneration of #1 in the case of drawing 5, either #5, #8 or #11 are reproduced according to a key input. At this time, the operation of a tag information management means 509 to compute the scene of a jump place is the same as that of the case of the 2nd operation gestalt.

[0073] Moreover, while a televiewer exchanges with a screen, it is also possible to form in a program the point (black dot of drawing 5) which waits for a key input so that a jump place can be selected. Moreover, it is also possible to enable it to jump on another scene in the middle of a scene. Moreover, an input can be inputted from the equipment of a network course [**** / inputting with voice by a key input of remote control, and the audio input unit], and others.

[0074] (4th operation gestalt) The 4th operation gestalt explains the system which sponsors the multi-story program in which a story advances by a televiewer's selection by real-time broadcast.

[0075] In order to realize a multi-story by real-time broadcast, the picture of each story which can be chosen in the multi-story is broadcast using two or more channels (subchannel), and it is a receiving side and becomes possible by changing a receiving channel according to the story to choose.

[0076] However, four subchannels are needed when it is going to sponsor the multi-story program which can choose a maximum of four stories in this case.

[0077] In the system of this operation gestalt, a multi-story program can be sponsored using a few number of subchannels.

[0078] In this system, as shown in drawing 6 , the multi-story program which can choose a maximum of four stories is broadcast on real time using three subchannels (a subchannel 1, the subchannel 2, subchannel 3). A subchannel 1 broadcasts the scene of #1, #2, #3, #4, #5, #6, #7, and #8 one by one here. a subchannel 2 # A subchannel 3 broadcasts the scene of 9, #10, #11, #12, #13, #14, and #15 in order, and broadcasts the scene of #16, #17, #18, #19, #20, #21, #22, and #23 in order again.

[0079] Scene #16 which scene #9 broadcast by this subchannel 2 and #10 were accumulated temporarily at the store means 507 of an accepting station, and were used as #9 in the story with a selectable multi-story and a scene of #10, and were broadcast by the subchannel 3 are accumulated similarly temporarily, and are used as a scene of #16 in the story with a selectable multi-story.

[0080] Moreover, using a hyperlink descriptor, scene ID of a jump place is set to the tag information in this case as "subchannel offset + scene ID offset + (key input)", as shown in 1203 of drawing 8 .

[0081] The televiewer who is viewing and listening to the multi-story of drawing 6 on real time looks at the scene of #1 currently broadcast by the subchannel 1 first. # if the scene of 1 finishes -- a story -- if a selectable display appears on a screen and a televiewer does not perform operation of what within predetermined time, either, the scene of #2 succeedingly broadcast by the subchannel 1 is displayed on a display means

[0082] # the scene of 2 -- finishing -- a story -- if a televiewer keys by remote control 514 when a selectable display appears on a screen, the tag information management means 509 will compute "subchannel offset + scene ID offset + (key input)" using the value which it keyed, and will calculate ID of the scene of a jump place When the computed value is "11", after the scene of #11 by which the real-time broadcast is carried out by the subchannel 2 is displayed on a display means and the scene of #11 finishes, the scene of #12 is displayed continuously.

[0083] Moreover, when the computed value is "9", the picture of #9 accumulated at the store means 507 is read and displayed, and continues, and the picture of #16 and #10 is read from the store means 507, and is displayed.

[0084] Thus, in a receiving side, a broadcasting station uses the empty channel in a subchannel, and broadcasts the scene used for a multi-story by the advance, the scene broadcast by the advance is accumulated temporarily, and when the story containing

the scene is chosen, the alternative on the appearance of a multi-story can be increased by reproducing it at the display time of original of the scene.

[0085] (5th operation gestalt) With the 5th operation gestalt, when a program is once recorded on videotape and it views and listens to it, the system which offers the service whose viewing and listening different from viewing and listening by real-time broadcast is attained is explained.

[0086] For example, in the case of the program of foreign-language conversation practice, as shown in drawing 7 , by real-time broadcast, the scene of #1, #2, #3(A) #4(B) #5, #6, #7, and #8 is displayed by the display means one by one. A televiewer records this program on videotape, in order to review conversation practice. The text of this program is sold at the bookstore and the method of the repeat practice which uses a picture-recording picture image for this text is indicated.

[0087] The televiewer who purchased the text performs the key stroke of the remote control directed, when the scene of #5 directed in the text at the time of picture-recording regeneration of a program is completed, in order to perform repeat practice.

[0088] Repetitive regeneration of the scene of #3(A) of a dialog fraction and #4(B) is carried out by this operation, and a pause is carried out. After repetitive regeneration is completed, it returns and regeneration from #6 is performed succeedingly.

[0089] In this system, in case of a program creation of foreign-language conversation practice, as the scenario of repeat practice using broadcast scene #3(A) of this program and #4(B) is created and link attachment by this scenario is shown in 1204 of drawing 8 using a hyperlink descriptor, "(function key input)+ (scenario pattern)" performs a broadcasting station, and it multiplexes and broadcasts this program and scenario.

[0090] In an accepting station, since a televiewer does not learn the selection technique of a scenario in viewing and listening to this program on real time, the picture of repeat practice cannot be seen. However, this program and scenario are accumulated for a store means, if the key stroke which the televiewer could know in the text at the time of the regeneration is performed, as for a tag information management means, the jump to a scenario will be performed according to "(function key input)+ (scenario pattern)", and, as a result, the picture of repeat practice will be displayed.

[0091] Thus, the broadcast potential scenario can be accumulated with a program information, and regeneration with the scenario different from a broadcast of real time can be performed by performing the jump to this scenario at the time of regeneration.

[0092] Moreover, this method is applicable also to the screen display of accounting guidance of a conditional access system.

[0093]

[Effect of the Invention] The broadcast system of this invention can diversify the mode of a scene collection, and program offer in alignment with a televiewer's taste can be performed so that clearly from the above explanation.

[0094] In the broadcast system using the tag information in which negative time specification is possible, a tag can be attached to a past scene and it is enabled to specify a highlight scene with a tag in an on-the-spot relay. Watching an on-the-spot relay, a televiewer can reproduce a highlight scene, when you like.

[0095] Moreover, the reconstitution of the scenario for attaining capture of the picture suitable for a televiewer's taste and shortening of viewing-and-listening time in the broadcast system which enabled rewriting of the tag information on an accepting station etc. is possible.

[0096] Moreover, by the system which a televiewer can advance a story in the system which a broadcasting station broadcasts that a multi-story program is so that it may like, and broadcasts a multi-story program using a subchannel, the multi-story which has much alternative with the few number of channels can be broadcast on real time.

[0097] Moreover, in the system which broadcasts the program by which the potential scenario was multiplexed, if it carries out in the program of foreign-language conversation etc., when picture recording of a program will be reproduced and it will review conversation, repeat practice is attained.

BEST AVAILABLE COPY